We claim:

1. A method of producing polyhydroxyalkanoates (PHA) polymer comprising at least one monomer selected from the group consisting of 3-hydroxypropionate, 3-hydroxyalerate, 4-hydroxybutyrate, 4-hydroxyvalerate, 5-hydroxyvalerate, and 3-hydroxyhexanoate, comprising

expressing in an organism genes encoding a polyhydroxyalkanoate (PHA) synthase and a CoA-dependent aldehyde dehydrogenase, wherein at least one gene is a heterologous gene, and

feeding an alcohol to the organism.

2. The method of claim 1 wherein the PHA polymer further comprises 3-hydroxybutyrate.

3. The method of claim 1 wherein the PHA polymer is selected from the group consisting poly-3-hydroxybutyrate-co-3-hydroxyvalerate, poly-3-hydroxybutyrate-co-3-hydroxypropionate, poly-3-hydroxybutyrate-co-4-hydroxybutyrate, poly-3-hydroxybutyrate-co-3-hydroxyheanoate.

4. The method of claim 1 wherein the alcohol is selected from the group consisting of 1-propanol, 1,2-propanediol, and 1-butanol.

5. The method of claim 1 wherein the genes further encode enzymes selected from the group consisting of acyl-CoA transferase, acyl-CoA synthetase, ß-ketothiolase, acetoacetyl-CoA reductase.

6. The method of claim 1 wherein the organism is selected from the group consisting of yeast, bacteria, fungi, and plants.

7. The method of claim 1 wherein the PHA synthase is poly(3-hydroxyalkanoate) synthase.

8. The method of claim 1 wherein the PHA synthase is poly(4-hydroxyalkanoate) synthase.

9. The method of claim 8 wherein the PHA synthase is poly(4-hydroxybutyrate) synthase.

10. The method of claim 1 wherein the organism is a bacterium.

11. The method of claim 10 wherein the organism is *E. coli*.

12. The method of claim 1 wherein the organism is *E. coli* expressing the *E. coli eutE* gene.

13. A polymer formed by the method of claim 1.

14. An article formed of the polymer of claim 13 selected from the group consisting of films, latexes, coatings, adhesives, fibers, binders, resins and medical devices.

15. The article of claim 14 wherein the article is a device selected from the group consisting of controlled release of therapeutic, prophylactic or diagnostic agents, drug delivery, tissue engineering scaffolds, cell encapsulation; targeted delivery, biocompatible coatings, biocompatible implants, guided tissue regeneration, wound dressings, orthopedic devices, prosthetics and bone cements, and diagnostics.

16. A recombinant organism selected from the group consisting of bacteria, yeast, fungi and plants comprising a heterologous gene encoding a CoA-dependent aldehyde dehydrogenase.

17. The recombinant organism of claim 16 further comprising a gene encoding a PHA synthase.

18. The recombinant organism of claim 17 further comprising genes encoding enzymes selected from the group consisting of acyl-CoA transferase, acyl-CoA synthetase, ß-ketothiolase, acetoacetyl-CoA reductase.

19. The recombinant organism of claim 18, wherein one or more of the genes are endogenous to the recombinant organism.

20. The recombinant organism of claim 18, wherein one or more of the genes encoding enzymes selected from the group consisting of acyl-CoA transferase, acyl-CoA synthetase, ß-ketothiolase, acetoacetyl-CoA reductase are heterologous to the recombinant organism.

21. The recombinant organism of claim 16 wherein the gene is *eutE* of *E. coli*.

22. The recombinant organism of claim 16 which is a bacteria.

23. The recombinant organism of claim 16 which is a plant.

24. A method of producing polyhydroxyalkanoate (PHA) polymers comprising at least one monomer selected from the group consisting of 3-hydroxypropionate, 3-hydroxyalerate, 4-hydroxybutyrate, 4-hydroxyvalerate, 5-hydroxyvalerate, and 3-hydroxyhexanoate, comprising

selecting an organism selected from the group consisting of bacteria, yeast, fungi and plants, genetically engineered to express a CoA-dependent aldehyde dehydrogenase and a PHA synthase, and feeding an alcohol to the organism.

25. The method of claim 24 wherein the PHA polymer further comprises 3-hydroxybutyrate.

26. The method of claim 24 wherein the PHA polymer is selected from the group consisting poly-3-hydroxybutyrate-co-3-hydroxyvalerate, poly-3-hydroxybutyrate-co-3-hydroxypropionate, poly-3-hydroxybutyrate-co-4-hydroxybutyrate, poly-3-hydroxybutyrate-co-3-hydroxyheanoate.

27. The method of claim 24 wherein the alcohol is selected from the group consisting of 1-propanol, 1,2-propanediol, and 1-butanol.

28. The method of claim 24 wherein the organism comprises genes encoding enzymes selected from the group consisting of acyl-CoA transferase, acyl-CoA synthetase, ß-ketothiolase, acetoacetyl-CoA reductase.

29. The method of claim 24 wherein the organism is selected from the group consisting of bacteria and plants.

30. The method of claim 24 wherein the PHA synthase is poly(3-hydroxyalkanoate) synthase.

31. The method of claim 24 wherein the PHA synthase is poly(4-hydroxyalkanoate) synthase.

32. The method of claim 31 wherein the PHA synthase is poly(4-hydroxybutyrate) synthase.

33. The method of claim 24 wherein the organism is a bacterium.

34. The method of claim 33 wherein the organism is *E. coli*.

35. The method of claim 24 wherein the organism is *E. coli* expressing the *E. coli eutE* gene.

36. A polymer formed by the method of claim 24.

37. An article formed of the polymer of claim 36 selected from the group consisting of films, latexes, coatings, adhesives, fibers, binders, resins and medical devices.

38. The article of claim 37 wherein the article is a medical device selected from the group consisting of controlled release of therapeutic, prophylactic or diagnostic agents, drug delivery, tissue engineering scaffolds, cell encapsulation; targeted delivery, biocompatible coatings, biocompatible implants, guided tissue regeneration, wound dressings, orthopedic devices, prosthetics and bone cements, and diagnostics.